



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,631	12/29/1999	BALWINDER S. SAMRA	17207-00006	2501

7590 07/23/2003

JOHN S BEULICK  
ARMSTRONG TEASDALE LLP  
ONE METROPOLITAN SQUARE  
SUITE 2600  
ST LOUIS, MO 631022740

EXAMINER

SHAFFER, ERIC T

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 07/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/474,631	SAMRA ET AL.
	Examiner	Art Unit
	Eric Shaffer	2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 3/13/2003.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-20 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 29 December 1999 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3-5 & 6.

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. This communication is in response to the amendments filed March 13, 2003.

***Summary Of Instant Office Action***

2. Applicant's arguments, filed March 13, 2003, concerning claims 1 - 20 in the Office Action mailed April 18, 2002, have been considered and deemed persuasive. The previous office action has been withdrawn and a new non-final office action is provided below.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 9 and 11 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thearling (US 6,240,411) in view of the article "Increasing Customer Value by Integrating Data Mining and Campaign Management software" by Kurt Thearling published in February 1999.

As per claim 1, the Thearling invention teaches a method of evaluating marketing campaign data, the data being in the form of database scores, stored procedures, and On Line Analytical Processing (OLAP) multidimensional structures, said method comprising the steps of:

providing a plurality of analytic models including marketing and risk models (column 9, lines 39 – 41, “the campaign manager may then retain the model in a model library. The model library may be a database or data structure storing the models”);

evaluating at least one of a model's performance over time and a combination of models' performance over time (column 6, lines 34 – 37, “the embodiment further includes a model evaluator, responsive to the selection criteria processor, to evaluate the model”);

defining user trends (column 9, lines 17 – 18, “it may be desirable to save model scores so that a trend in the model score can be documented”).

The Threaling invention does not teach the use of gains charts.

The article “Increasing Customer Value by Integrating Data Mining and Campaign Management Software”, Thearling teaches the application of data mining concepts to marketing campaign management, including the creation of models and model scoring, maximizing profitability, Return on Invention (ROI) and the use of “gains charts” in the area of data mining (pages 7 - 8).

It would have been obvious to one of ordinary skill in the art of data mining at the time the invention was made to incorporate the gains charts, profitability measures such as ROI, and model scorings into the Trealing invention because these elements provide additional means by which the results of the data mining can be displayed to and evaluated by the user of the Trealing invention. Trealing teaches that “a gains chart suggests some benefits available though data mining” (Thearling article, page 7) because gains charts give a cumulative display of the results achieved by progressively increasing the number of people contacted during a marketing

campaign. By calculating the net of revenue and cost, it is possible to see the results at different marketing campaign size and find the optimum size for a most profitable campaign.

5. As per claims 2 and 12, the article “Increasing Customer Value by Integrating Data Mining and Campaign Management Software” teaches a method and system wherein said targeting engine is further configured to determine where profitability has been changed over time (page 4, “measure the profitability and ROI of all ongoing campaigns”).

6. As per claims 3 and 13, Thearling teaches a method and system wherein said targeting engine is further configured to determine where response rate has been changing over time (column 9, lines 17 – 18, “it may be desirable to save model scores so that a trend in the model score can be documented”).

7. As per claims 4 and 14, the article “Increasing Customer Value by Integrating Data Mining and Campaign Management Software” discloses a method and system wherein said targeting engine is further configured to determine where a number of accounts are closed (page 3, “Typical questions that Data Mining answers include: Which customers are most likely to drop their cell-phone service”).

8. As per claims 5 and 16, Thearling teaches a method and system wherein said targeting engine is further configured to determine to check model performance of the model based on user defined trends (column 9, lines 17 – 18, “it may be desirable to save model scores so that a trend in the model score can be documented”).

9. As per claims 6, 11 and 17, Thearling teaches a method and system wherein said targeting engine is further configured to analyze a particular population segment (column 4, lines

12 - 15, "records with fields having an income of more than twenty five thousand dollars per year and an age of over 45").

10. As per claims 7 and 18, Thearling teaches a method and system wherein said targeting engine is further configured to maintaining feedback to improve subsequent marketing cycles (column 9, lines 19 - 20, "a mechanism to provide a feedback loop").

11. As per claims 8 and 19 discloses a method and system wherein said targeting engine is further configured to illustrate customer trends (column 9, lines 17 – 18, "it may be desirable to save model scores so that a trend in the model score can be documented").

12. As per claim 9 describes a system for evaluating marketing campaign data, said system comprising:

a customer database further comprising historical campaign results (column 9, lines 15 – 17, "Permit the score to be saved so that it could be used during subsequent evaluations);

a graphical user interface for presentation of trend analysis data (column 4, lines 57 – 59, "a graphical interface");

a targeting engine embedded with a plurality of analytic models including marketing and risk models, the marketing models include at least one of a net present value/profitability model, a prospect pool model, a net conversion model, an attrition model, a response model, a revolver model, a balance transfer model, and a reactivation model, the risk models include at least one of a payment behavior prediction model, a delinquency model, a bad debt model, a fraud detection model, a bankruptcy model, and a hit and run model (Thearling article, page 4, "measure the profitability and ROI of all ongoing campaigns");

wherein the targeting engine is configured to:

evaluate at least one of a model and a combination of models using structures that segment gains charts to discover where at least one of a model and a combination of models is under performing (Thearling article, page 7 – 8, “gains charts”);

evaluate at least one of a model's performance over time and a combination of models' performance over time (column 6, lines 34 – 37, “the embodiment further includes a model evaluator, responsive to the selection criteria processor, to evaluate the model”);

define trends relating to the marketing campaign data (column 9, lines 17 – 18, “it may be desirable to save model scores so that a trend in the model score can be documented”).

13. As per claim 15, Thearling teaches a method and system wherein said targeting engine is further configured to determine propensity of a customer to avail themselves to other products over time (column 1, lines 46 – 48 “records in a database of individuals corresponds to individuals who are likely to respond favorably to the targeted mailing”).

14. As per claim 20 Thearling teaches a method of evaluating marketing campaign data, the data being in the form of customer lists, database scores, stored procedures, and On Line Analytical Processing (OLAP) multidimensional structures, said method comprising the steps of:

providing a plurality of analytic models including marketing and risk models, the marketing models include at least one of a net present value/profitability model, a prospect pool model, a net conversion model, an attrition model, a response model, a revolver model, a balance transfer model, and a reactivation model, the risk models include at least one of a payment behavior prediction model, a delinquency model, a bad debt model, a fraud detection model, a bankruptcy model, and a hit and run model (Thearling article, page 4, “measure the profitability and ROI of all ongoing campaigns”);

generating gains charts by comparing marketing campaign customer lists to corresponding marketing campaign results and evaluating at least one of a model and a combination of models by using structures that segment gains charts to identify where at least one of a model and a combination of models is under performing (Thearling article, page 7 – 8, “gains charts”);

evaluating over time and over a plurality of marketing campaigns at least one of a model's performance and a combination of models' performance (column 6, lines 34 – 37, “the embodiment further includes a model evaluator, responsive to the selection criteria processor, to evaluate the model”);

identifying user defined trends including identifying trends within segments by analyzing structures of a plurality of marketing campaigns in chronological order (column 9, lines 17 – 18, “it may be desirable to save model scores so that a trend in the model score can be documented”).

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thearling (US 6,240,411) in view of the article “Increasing Customer Value by Integrating Data Mining and Campaign Management Software” by Kurt Thearling published in February 1999 and the book “Building Data Mining Applications for CRM” by Berson, Thearling and Smith published December 22, 1999.

The Thearling invention teaches a data mining device that uses models for accessing records in a database to select prospects for the planning of a marketing campaign. The

invention does use a database of historical records, but does not specifically make mention of OLAP.

The article “Increasing Customer Value by Integrating Data Mining and Campaign Management Software”, Thearling teaches the application of data mining concepts to marketing campaign management, including the creation of models and model scoring, maximizing profitability, Return on Investment (ROI) and the use of gains charts. The article does not specifically make mention of OLAP.

The book “Building Data Mining Applications for CRM” teaches data warehousing and data mining concepts for use in the management of customer relationships. The book also, as per claim 10, teaches OLAP, as shown in the book table of contents, which recites “OLAP Tools”.

It would have been obvious to one of ordinary skill in the art of data mining at the time the invention was made to incorporate the OLAP Tools of the Berson, Thearling and Smith book with the Thearling patented invention and the gains charts, profitability measures such as ROI, and model scorings, because OLAP Tools permit a user to quickly navigate around large collected data sets, which would increase the speed with which the combined device would operate.

***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

d'Eon et al. (US 6,006,197) – Internet marketing campaign management device.  
Cortes et al. (US 6,480,844) – Data mining infers behavior characteristics with graphs.  
Simoudis et al. (US 5,692,107) – Data mining system that uses predictive models.  
[www.theearling.com](http://www.theearling.com) - website with articles on data mining and warehousing.

17. None of the claims are allowed and all of the claims stand rejected.

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric Shaffer whose telephone number is (703) 305-5283. The Examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington D.C. 20231

Or faxed to:

(703)746-7238 [After Final communications, labeled "Box AF"]

(703) 746-7239 [Official communications]

(703) 706-9124 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2121 Crystal Drive, Arlington, VA, 7<sup>th</sup> floor receptionist.

ETS  
July 7, 2003

  
TARIQ R. HAFIZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3900